

Original

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means for the respective range gates; and wherein said processing means processes the stored data in said array corresponding to a plurality of said range gates to provide said respective plurality of range output signals.--

REMARKS

The Office Action of January 4th, 1991 and the references cited therein have been carefully considered.

In this Amendment, the specification has been amended to correct various informalities, including providing reference characters for the various blocks of Figure 3, and the claims have been amended to even more clearly and particularly define the invention and to overcome various informalities, including the Examiner's formal rejection. Additionally, new dependent claims 7-9 have been added to recite additional features of the invention. Finally, attached is a copy of Figure 3 showing proposed changes in red, and in particular the addition of reference characters to the various blocks of this figure. Upon approval of the proposed amendments, a substitute formal drawing will be filed at an appropriate time.

Reconsideration of the rejection of claims 2-6 under 35 USC 112, second paragraph as being indefinite for the reason that it was not clear which structural elements in claim 1

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were being further limited by the limitations of these claims, is respectfully requested. Each of claims 2, 3, 5 and 6 has now been amended to clearly bring out that it is the processing means of claim 1 which carries out the various functions recited in these claims. With regard to claim 4, it is submitted that this claim fully complies with 35 USC 112, second paragraph as originally presented since it simply more specifically defines the "target" and other objects being detected by the system according to the invention. Accordingly, it is submitted that, upon reconsideration, the rejection of claims 2-6 under 35 USC 112, second paragraph as being indefinite should be withdrawn.

The rejection of claims 1-6 under 35 USC 102(b) as being anticipated by the patent to Fishbein et al has been noted and is respectfully traversed. In urging this ground of rejection, the Examiner has identified various elements in Figure 9 of Fishbein et al as corresponding to the features recited in claim 1, and has thus concluded that the subject of claim 1 is anticipated by this reference. While the Fishbein et al reference may be considered to show the claimed system up to and including the correlator and the code delay means, it is submitted that there is nothing in the Fishbein et al reference which corresponds to the claimed "processing means".

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The block 86 of Figure 9 of Fishbein et al identified by the Examiner as the claimed processing means is simply a video amplifier which thus performs no processing. In any case, it clearly does not process range/amplitude data from the correlator to discriminate between reflections due to the target and reflections due to other objects adjacent the target as required by claim 1. Accordingly, it is submitted that, even as originally presented, claim 1, and consequently claims 2-6 dependent thereon, are not anticipated by the Fishbein et al reference under 35 USC 102(b).

Despite the above, claim 1 has been amended to further define the function of the processing means. That is, claim 1 as now amended specifically recites that the processing means discriminates between reflections due to the target and those due to other objects adjacent the target at shorter ranges, and produces respective range output signals corresponding to the target and the other objects. In this regard, note Figure 2 wherein two respective range outputs from the processor 12 are clearly shown. The video amplifier 86 of Fishbein et al clearly does not teach the additional limitations of claim 1 as now amended.

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It should further be noted that the Fishbein et al reference contains no other structure which corresponds to the processing means as defined in claim 1. As pointed out in the specification, the primary purpose of the present invention is to provide an aircraft radar ranging system wherein both the range of a predominate target, particularly the terrain or ground for altimeter purposes, and the range of less dominate shorter range targets, for example, trees, buildings etc., adjacent the target may be extracted from the received signals. This is achieved by the processing means according to the present invention which looks at the output signals of the correlator for the various range gates and extracts the respective ranges by processing the amplitude/range data for the various range gates. No such arrangement is taught, or even discussed by Fishbein et al.

For the above stated reasons, it is submitted that claim 1, either as originally presented, and particularly as now amended, is allowable over the Fishbein et al reference under 35 USC 102(b). Claims 2-6 are each dependent on claim 1, and accordingly are allowable over the Fishbein et al reference for at least the same reasons as that claim. Moreover, claims 2, 3, 5 and 6 define additional features of the processing means which are likewise not taught, or even made obvious, by

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Fishbein et al. Further, claim 4 brings out that the system is used, at least in part, as a radar altimeter, which likewise is not taught by Fishbein et al. Accordingly, for these additional reasons, it is submitted that claims 2-6 are allowable over the Fishbein et al reference.

Newly presented claims 7 and 8 are dependent on claims 5 and 6 respectively, and new claim 9 is directly dependent on claim 1. Accordingly, these claims are allowable over the Fishbein et al reference for at least the same reasons as the claims from which they depend. Additionally, each of these claims recites additional features which per se are not taught by the Fishbein et al reference and accordingly further patentably distinguish these claims over the cited reference.

In view of the above amendments, and for the above stated reasons, it is submitted that all of the claims pending in this application, i.e. claims 1-9 are allowable over the prior art of record and are in condition for allowance. Such action and the issuance of the Notice of Allowability (Form D-10) by the Examiner are respectfully requested.

In keeping with Applicants' duty of disclosure, enclosed is a Form PTO-1449 identifying references AA, AL, AM and AR as well as a copy of each of the identified references.

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Each of these references was cited in a Search Report issued in connection with the corresponding British application. A copy of the British Search Report, which indicates the relevancy of the references, including particularly relevant identified portions, to the claims is likewise enclosed. It is respectfully requested that the Examiner consider each of the enclosed references and indicate such consideration in the next Office Action.

If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone undersigned counsel to arrange for such a conference.

Respectfully submitted,

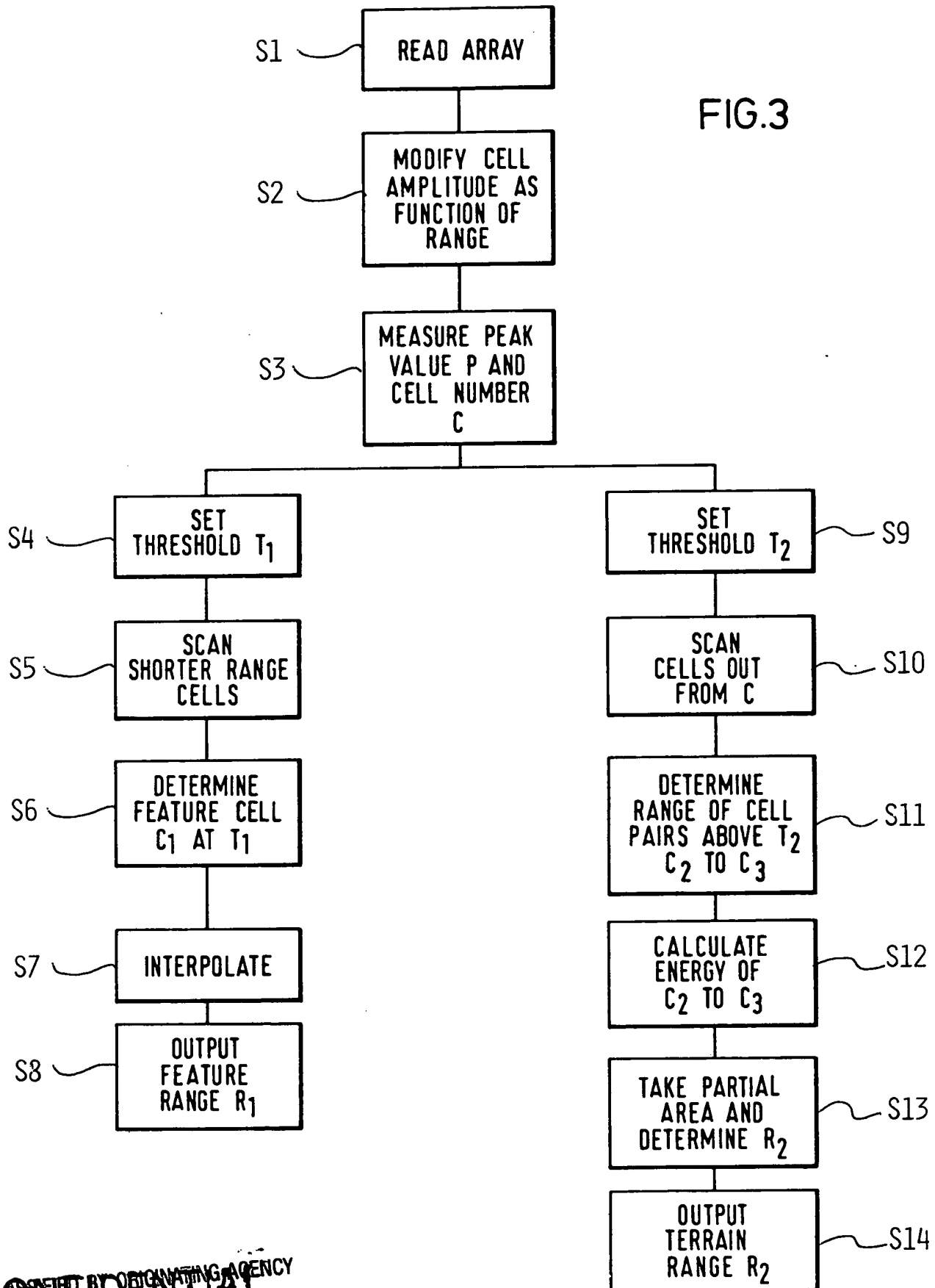


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FIG.3

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ALGORITHM FOR EXTRACTION OF FEATURE AND TERRAIN RANGES

Part of 24204-1